

KEY CLUCKS



HELP! (From the Staff of "KEY CLUCKS")

When the CFO was just beginning, a few of us dug into our pockets to pay for the cost of "KEY CLUCKS." In addition, the expenses involved with the mailing and reproduction of Membership Certificates and special awards was defrayed to some extent by those doing the work. After a short while, we received help from generous members.

Today with 615 plus chickens, the pickins' are slim! Therefore, in order to help defray the cost of printing, paper, and postage for "KEY CLUCKS," we are requesting \$2.00 per year to be sent to KØPFX, Mel Whitten, 3219 Haas Avenue, Bridgeton, MO 63044. These funds will keep Mel from divorce court and keep Doris and Stan, W9WBL, from having to take out a second mortgage on their home. In addition, when you nominate a new CFO prospect for membership, either you as a sponsor or the new prospective member should include \$1.00 with your request. These funds should be sent to W9TO or W9WBL along with the new member's name, address and call.

Reminder: In order to continue to receive "KEY CLUCKS," please help out by sending your \$2.00 to Mel, KØPFX. If you have done this already this year, let Mel know. Please respond by March 30, 1982.

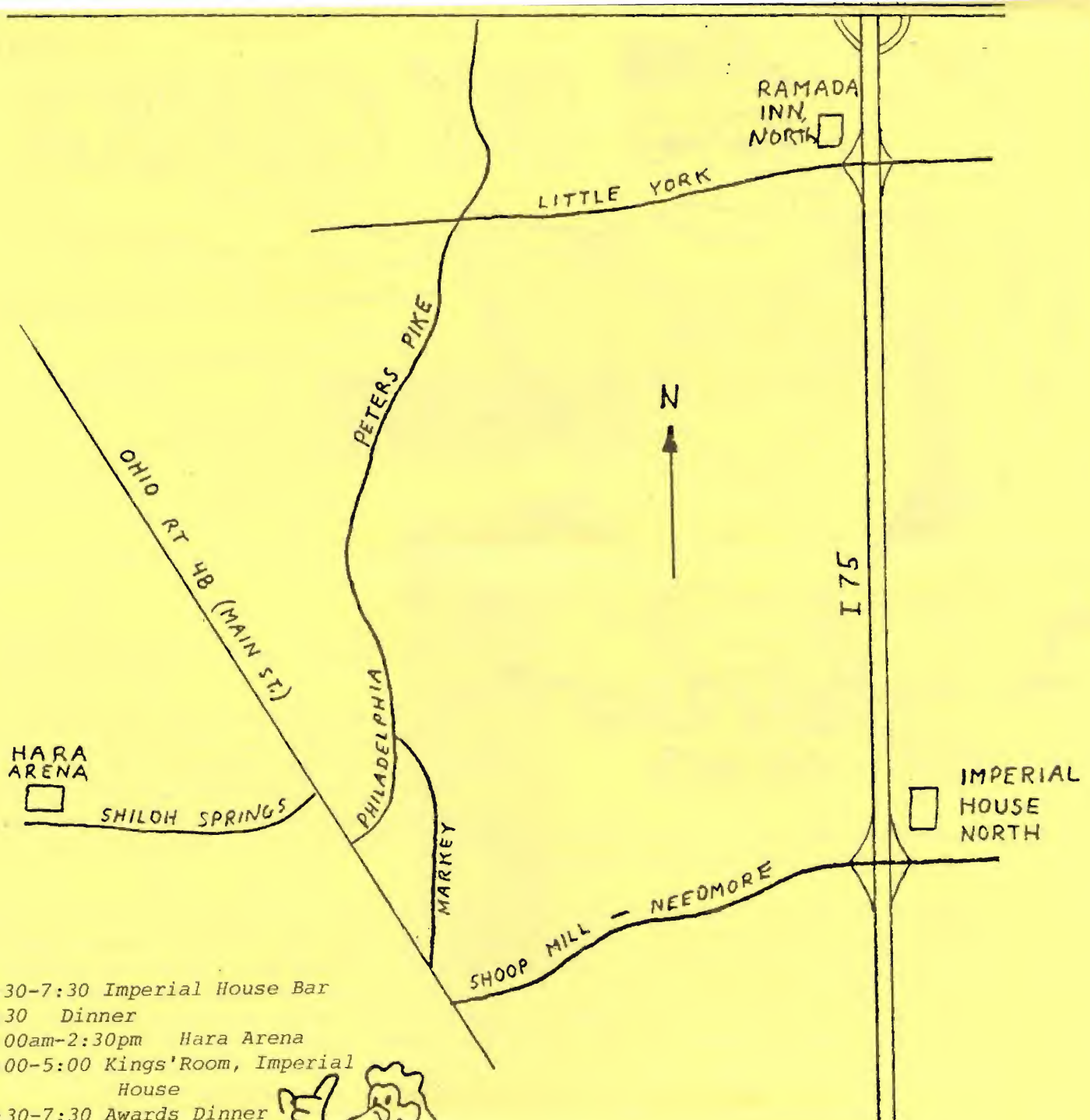
Fox in the Coop?

These are "moved, no forwarding address" lost Chickens. If you know of their whereabouts, please let know - Doris, W9WBL, XYL 51 South Lincoln, Mundelein Ill. 60060.

N6DLE #345
N8NN #400
K4EWG #429
G30AY #490

W8SA #499
KK8A #502
K40AH #506
9Y4TR #511

KN7B #537
W2UZL #571
WB2GDZ #601



Fri. 5:30-7:30 Imperial House Bar
 Fri. 7:30 Dinner
 Sat. 9:00am-2:30pm Hara Arena
 Sat. 3:00-5:00 Kings' Room, Imperial House
 Sat. 5:30-7:30 Awards Dinner
 Sat./PM - Sun./AM 11:00pm until ? Room Parties
 Sun./AM Early "Breakfast with Big Bird & Zeke"



"OFFICIAL CFO EMERGENCY LOCATION"

TEN-TEC BOOTH - HARA ARENA

IMPERIAL HOUSE BAR



WHAT IS the CFO "Dayton Cluck-In II"? It is the enhanced version of last year's "Dayton Cluck-In I".

Two years ago, the "hard core" CFO group decided to have a "Cluck-In". Therefore, the "First Annual CFO Cluck-In" took place at the Dayton Hamvention last April. One of the greatest benefits resulting from this get-together were the improved relationships between the CFO and their beloved XYLs. No kidding, the XYLs had a wonderful time! I overheard people putting their marriages back together! There are stories of "anti-ham" XYLs actually cracking open the family piggy bank and rushing out to purchase keyboards for their OM. Not only were the XYLs absolutely amazed at the good time they were having, but their OM were even more amazed. Now, let it be known that this was no accident. Rather, it was a carefully planned program aimed at incorporating "anti-ham" XYLs into the CFO and it worked! And this year it will work again! Grab your YL or XYL and kids and join us for the "Dayton Cluck-In II". It takes you to make it great again this year!

Date: April 23rd, 24th & 25th.

For Room Reservations: Call the Dayton Hamvention, (513)223-2612 or try to find your own. Remember, the Early Bird gets the room.

For the CFO Saturday Night Dinner: Fill in "Tear sheet" and send to Steve Waterman, K4CJX, 1100 Maplehurst Lane, Nashville, TN 37204.
IMPORTANT: - If you think you want to attend the Second Annual CFO "Awards" Dinner, fill out the tear sheet below and send it to me ASAP.
TNX.

Weekend Schedule:

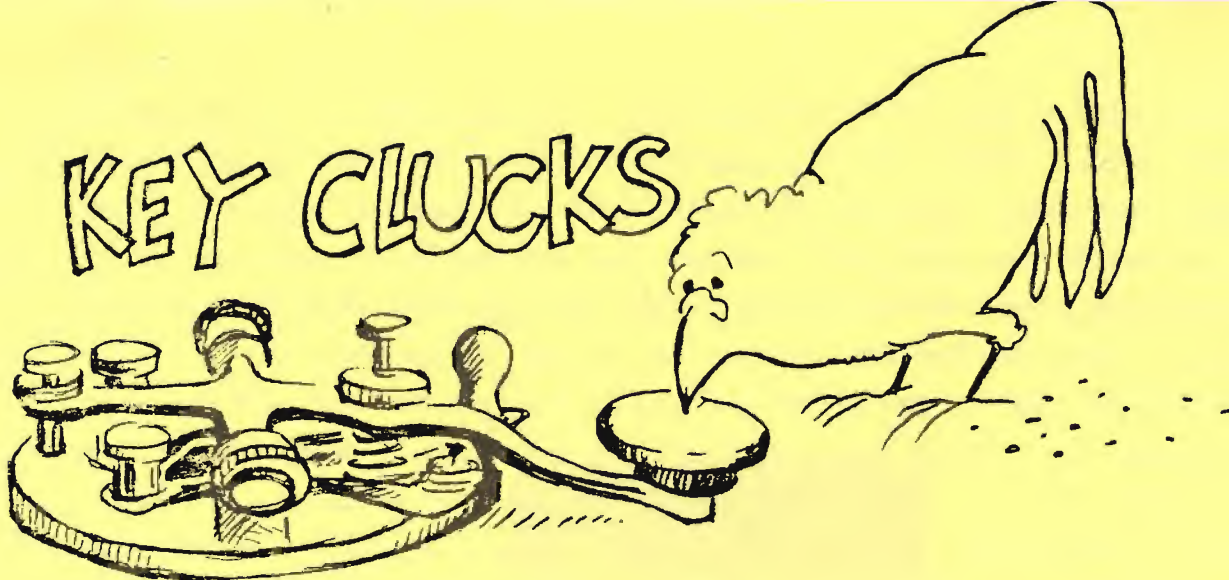
- Friday, April 23rd 5:30 - 7:30 PM Imperial House Bar, "Meet & Greet"
- Friday, April 23rd 7:30 Dinner "Individuals Go Wherever"
- Saturday, April 24th 9:00 AM - 2:30 PM, Hara Arena, "Goodie Looking"
- Saturday, April 24th 3:00 - 5:00 PM Kings' Room at Imperial House North, "Meet & Greet" (807s & 813s)
- Saturday, April 24, 5:30 - 7:30 PM, Imperial House North, "Second Annual Awards Dinner" (Fill out form below and send to K4CJX!)
- Saturday PM/Sunday AM 11:00 PM until - Imperial House North "various 807 & 813 room parties" (Check with W9TO & KØPFX for specifics.)
- Sunday AM Early "Breakfast with Zeke & Big Bird" (Check with W9TO or WØZR for specifics.)

- - - (CUT & SEND TO K4CJX - 1100 MAPLEHURST LANE, NASHVILLE, TN 37204) - - -

Please make _____ reservations for _____ CFO # _____
for Saturday night's CFO "Second Annual Awards Dinner". (Buffet style: three meats, vegetables, drinks, etc. at \$12.61 cash.) I understand that in order to reserve a special room, you need to know if I am attending by April 9, 1982.

(Signature)

DO NOT SEND MONEY, JUST BRING IT WITH YOU.



STANDARDS FOR OUR CODE: from Jim, W9TO, CFO #1

The old Morse code was changed to Continental code for mechanical reasons when the Kleinschmidt perforator and the ingenious Boehme keying head, or tape reader, automated cw. Speeds of 200 wpm were often used when traffic was heavy and time was short. The receiver fed an ink slip recorder that produced a visual cw that was later read off and typed out as the tape was pulled through an open guide above the operator's typewriter, or mill, as it was then known. At slower speeds the cw was heard and typed out directly on shipboard and at many fixed locations, and it still is.

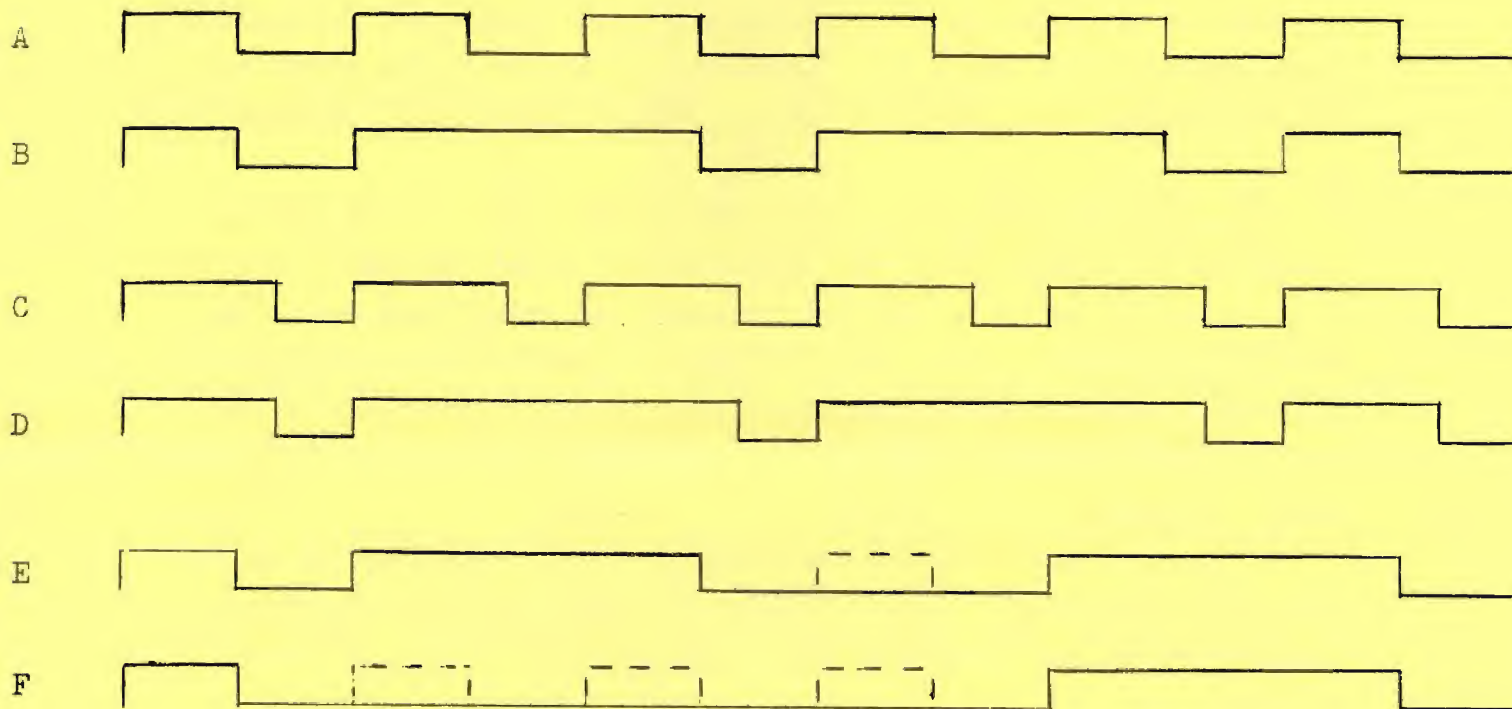
The perforator produced a simple 2-unit tape. On one side were the "mark" holes; on the other, the "space" holes. Along the center were the drive holes, 10 per inch, which synchronized the keying head operation. Two pins sensed the holes; their alignment or stagger could be adjusted for weight control, which remained constant for any tape speed, or wpm. A properly designed keyer or keyboard accomplishes that with fairly simple digital circuitry.

To see what standard cw is, or should be, and to clarify some definitions such as "a dash is equal to 3 dots" (wrong) and "a word space is 7 bauds" (wrong) and "ratio" (means nothing), refer to the odd-looking cw below.

A shows a string of dots at 50 percent weight, or duty cycle. C shows them at 67 percent duty cycle. Notice that the spaces are shorter and that the dot-plus-space duration remains the same. Same wpm, in other words. B shows the letter "P". Look at D, which also shows the letter "P". Notice that the dashes are just two dots bridged. That's the proper definition for a dash, for any duty cycle (not just 50 percent). Notice also that the dash spacing equals the dot spacing.

E shows the word "AT". The letter spacing is a silent "e" and in F the word spacing is a silent "s" - these remain true for any duty cycle. Bauds are not dots or dots per second. Ratio, or time duration, is fixed at two to one. A dot-plus-space should be called a "dot unit" or DU. A dash become 2 DU, letter spacing one DU and word spacing 3 DU. The "standard word" plus the required word space is 25 DU, and is used for calculating wpm. 50 wpm equals 1250 DU/min equals 20.83 DU/sec. Interesting to observe that at 50 wpm you make almost 21 dots per second. Standard words are PARIS and JOY. Send JOY on your keyboard for 30 seconds, multiply the word count by 2 and you should get keyboard clock wpm.

- This was written to explain our standards for cw, terms applied to cw, and what wpm means. W9TO.



- A Dots at 50 percent duty cycle or "weight"
- B The letter "P"
- C Dots at 67 percent duty cycle. DU duration or wpm as in A.
- D The letter "P" at 67 percent. The dash is two dots bridged as before, is correct, and does not equal 3 dots.
- E The word "at" with one letter space of one DU shown.
- F A word space of 3 DU, shown aligned with 3 DU in A above.

- CFO Mailbox -

Purpose: To provide an automatic relay and message storage facility for the CFO.

Uses:

- CFO news items.
- New CFO calls, names and numbers.
- Message storage from one CFO to another.
- Announcements of "want to get rid of" or "needed" equipment.
- Determine band conditions.
- Relay when point to point conditions are poor.

Frequency: 7032.25 (this may read out as 7033 due to the typical 750 hz. offset).

Time: When I am at home and not operating elsewhere. (Most of the time.)

Access Code: Send K4CJXZW without any space between letters.

User Commands:

K4CJXZW - Activates the mailbox system.

I/Z (Instructions) Lists user commands.
W/Z (Write) Begins message storage.
G/Z (End and Go) Sends message storage and
replays message to determine if message
was put in correctly.
XXS/Z Changes the Speed of the system to XX wpm.
O/Z (Off) Deactivates the mailbox system.

Directory Commands:

L/Z Lists the message headings in the Directory.

- to Replay message number "XX," send "XXR/Z"
- to Delete message number "XX," send "XXD/Z"

On CW, the symbol BT (=) ends a directory message heading which will be what is listed in the directory to represent the entire message.



The following is an example of how the CFO mailbox system operates:

Send: "K4CJXZW" (activates the mailbox system).

Send: "I/Z" (lists the instructions if you need them).

To write a message, send:

"VVVW/Z K4CJX DE K8IF BT Steve, I will be operating a Mailbox
System for the QRP group on 7043khz weekday evenings and on
weekends 73 Tom G/Z"

(Message will now replay, giving the time and date message was entered.)

To list the directory, send: "vvvL/Z" and the above message heading sent
prior to the (BT) will appear as follows

"(time) (date) DE K4CJX DIRECTORY
01 K4CJX DE K8IF
02 etc., 03 et al
End of DIRECTORY DE K4CJX Next?"

To then send message number "01", send "01R/Z" and the message will replay.
If a message is not in that number, it will say "MSG NOT FOUND."

To delete the message, send "01D/Z" and it will tell you "MSG DELETED ON
(time) (date)."

The system is quite simple to use. It helps to "load" things into your
buffer (if you have one) prior to letting it play. Add a few "vvv" in front
of each command to start it tracking.

Try it, you'll like it. (Mistakes are welcome.)

Other CFO CW Mailboxes:

K4CP	access:	K4CPZW	7032.25
KD8X	access:	KD8XZW	3567
K81F	access:	K81FZW	7043

These station instruction formats will appear in future issues of KEY
CLUCKS. Anyone interested in becoming involved with such devices, feel free
to contact us for information.

FROM AND ABOUT THE GROUP IN THE COOP

Double Cluckers Corner (RTTY) from Steve, K4CJX, CFO #7

There is an increasing number of CFO who have an interest in operating RTTY and do so frequently. Perhaps we should start a "Double Cluckers Net" to compliment the little used and not much thought of Saturday AM "CFO SSB Net" now held on 7160 khz at 9:00 CST. Anyone wishing to step forward, take the initiative and start such an adventure, please contact K4CJX, CFO #7 or access the mailbox for information regarding the proposed Net.

CFO SSB Net from Steve, K4CJX, CFO #7

Purpose: None (other than to be broad minded).

Time, Date and Frequency: 9:00 AM CST (10:00 AM EST)

Saturdays on 7160± the QRM. Don't be chicken, be a chicken and join us!

(Remember, be humble, try SSB once a week. After all, you will be talking to CFO).

CFO DX Pediton from Stu, W9HI, CFO #4

Date: March 29th through April 6th.

Call: Stu, W9HI, CFO #4 will operate as "J_____".

QTH: St. Vincent, West Indies.

ORG: 7030, 14050, 21050, 28050.

I will be looking for you chickens who didn't have the good sense to "migrate" south with me.

"Fast Flying" from Steve, K4CJX, CFO #7

The following CFO members have been awarded "The Five Star Operators Club Award" (ARRL) for sending and receiving over 80 WPM! K5TO CFO #81, K8IF CFO #86, W2YS CFO #174, W7QYA CFO #181, and K4KHT CFO #166. This award was issued to these fast flying chickens a while ago, but it certainly deserves on going recognition. Congratulations!



Poor Lonesome George from Ron, K1AO/4, CFO #26

George, K1AAG/MM, CFO #354 who is rock bound (with QRM from his own back wave) on ± 7032 is looking for CFO types to keep the blues away. Listen for a lonesome "CQ" coming from the Gulf of Mexico or up the east coast. If you do hear poor lonesome George, please press as hard as you can on the key and give him a call.

Contributing Editors from Jim, W9TO & Steve, K4CJX

Notice an absence of contributing editors? So do we! Please put your items of interest in writing and send them to Jim, W9TO, CFO #1, 2436 Marcy Avenue, Evanston, Ill. 60201. Tnx.

Q Signals from Jim, W9TO, CFO #1

Here are a few good ones that are not often used: QRD? Where are you bound and where are you from? Useful for mobile QSOs. QRH: Your frequency varies. QRV? Are you ready? Use that after returning from a QRX, before resuming your transmission. QSU: Send on this frequency. A Winner. QTX: I will keep my station open. A good reply to Pse QRX.

QSU: Normal QRM, selective cw filters, QSK, and more-than-two-station QSOs all make it desirable to be able to put your signal where the others are, or aren't if you call CQ. On ssb, QSU is almost automatic, but not so for cw, where transmit offset and a latitude of cw tuning for receiving may cause off-frequency operation. One active kW operator, for instance, is usually about one kHz off the other signal, and often puts a big CQ upon another QSO. Such QRM is inexcusable. A transceiver can be tricky on cw, but there are ways to QSU. The best by far is via a reference audio frequency from your side-tone, or a code-practice oscillator. After adjustment, it tells you what the "pitch" or frequency of the received signal should be. Try it. The other guys will like it.

QRP: Tom, K81F, would like us to know that QRP frequencies are 3550, 7040, 14060, 21060 and 28060 kHz. If you hear QRP activity, please QSY.

CFO Coop Group Grows from Jim, W9TO As of 2-8-82, CFO membership is 615.

CFO Loses a Good Member from Jim, W9TO

With deep regret, we must tell you that Ron, VE3BIA and CFO 150, joined those other good Silent Keys on 1-11-82. His CFO 150 will not be reissued.

CFO Technical Foundation from Jim, W9TO, CFO #1

The CFOTF has almost been organized, to demonstrate that we are serious about improving and extending the uses of CW for the public benefit and economy. Other non-profit trade associations have laboratories and at least one scientist in a long white coat to avoid antitrust troubles while they are QRL with price-fixing, mostly. We are therefore forming the CFOTF and are gathering equipment for the laboratory. One member has sent us an expired Heathkit discount coupon, several feet of almost insulated wire and what may be a power mike switch. Other donors have sent us a small rubber grommet, hard as a rock, a book called The Fundamentals of Wireless, a rather smooth hacksaw blade, and a small box of repair parts for a steam iron. One member's wife has offered a large and complicated antenna tuner. This means that we must have a laboratory and one almost-white coat, so we have formed the CFOTFBF which means the CFOTF Building Fund. Please make your checks payable to the CFOTFBFCFO, which means the CFOTFBF Chief Finance Officer, and add \$2.00 for postage and handling.

CFO "Dayton Cluck-In Annual Awards Dinner" from Steve, K4CJX, CFO #7

Dick Fry, K4XU, CFO #157 and his other Ten Tec CFO type comrades will join us for this festive occasion. Be thinking of all the gripes you can muster about what is wrong with Ten Tec gear. Since he is the culprit that designed most of it, he will just love to spend an evening listening! (Just kidding, Dick). In addition, Joe, N3JL, CFO #486 will be at this event. Joe is president of Microlog Corporation. He is the clucker who is responsible for K4CP and K4CJX cluttering up the bands with mailboxes. (You will recognize him by the suit of armour he will be wearing)

There will be other distinguished CFO members who will attend the dinner, like Dave, W9AJR, CFO #57, owner of Skipjack Corporation. Why not be there and be distinguished too?

CFO Recognition from Steve, K4CJX, CFO #7

Take a look at the "Perch" of Vern, W9FAM, CFO #72 on the cover of August 1981 CQ Magazine. There is enough room on Vern's antenna system for half the chickens in the coop! (The other half should then not stand under the antenna.)

CFO QSO PARTY RESULTS

Thanks to all who participated in this heralded event & to those who didn't 'chicken-out' by sending in thier score. The un-official, easily contested results are:

CALL - SCORE	CALL - SCORE	CALL - SCORE
W9TO 192* <u>WINNER</u>	KB9XE 90	W1FZY 45
W9WBL 164	KØPFX 79	W7FJ 43
KIØY 155	W3ELZ 70	WA2HQD 42
W8FEC 142	WA4LJJ 65	K4JVT 41
VE7NH** 122	W6WQV 59	W9NAX 40
N5CID 109	W9GRJ 55	W2MA 27
WB8ITT 107	W9KZZ 53	WB9DKM 24
K4CJX 107	F3NB 52	W8SZ 22
KBØPB 104	W4NG 50	K8KHS 21
W4LJH 104	KK9E 50	K8IF 20
VE3EMA 102	W9WF 47	K2ONP 16
W4HOJ 100	W4JBQ 46	W7FT 13

The CFO QSO PARTY brought alot of chickens "out-of-the-coop" and seemed to be enjoyed by all. Over 200 participated and a night did not go by that we did not hear alot of cluckin' around the bands. If you would like to have a party this year, please let me know. The suggestion box is open for comments regarding duration, frequencies and scoring. Our winner, Jim W9TO, will be presented 'his reward' at the Dayton Saturday Night CFO Dinner.

We thank Doris, XYL of W9WBL for the participation award she provided to all the CFO-ers who sent in thier score. I am very proud of mine, as I am sure the other CFO boys are.

Keep-on-cluckin'

Mel
Mel, KØPFX/CFO 23

*W9TO did not use any contacts with "VE" stations as DX, his score was already the the highest, so I did not adjust it up.

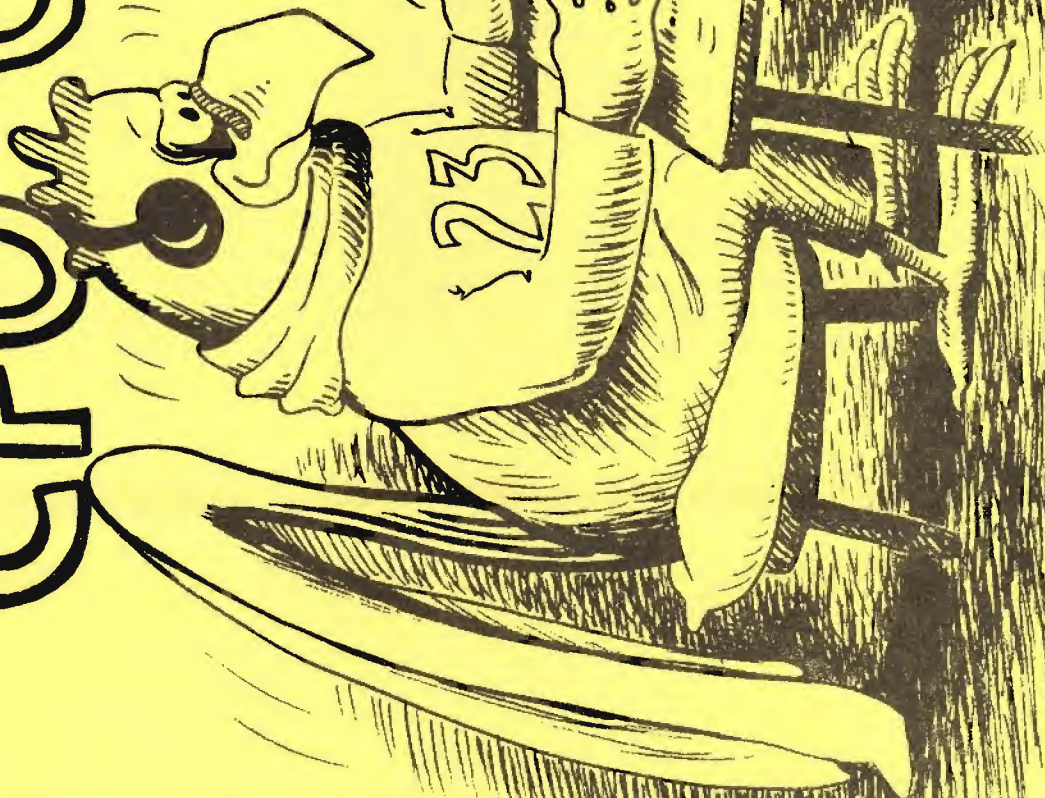
**VE7NH used everybody he contacted as DX, he was allowed only stations in the Roster with "DX" followoing thier CFO number to count as 2 points. Score was adjusted to to reflect this change.

PARTICIPATION AWARD

CFO QSO PARTY

DEC. 1 - 15, 1981

M E L ... K O P F +



Fast Draw Hill Billy Boxes:

There are modifications to Ten Tec rigs which will improve performance when using a linear amplifier.* First is a simple change to eliminate the delay of the control relay while using ssb. As built at the factory, the time constant capacitor, C3 in fig. 7 is tied directly to ground on the circuit board. By lifting the ground end of C3 and taking it to the unused center pin on the board, a wire can be run to the mode switch, S1E (CW1 and CW2 positions), which will activate the delay only when using CW. S1E is part of the rear wafer, closest to the chassis.

The second modification involves removal of the control relay, K1. This should be done only if the amplifier uses a positive voltage to key its control and changeover relay. The reason for doing this is to eliminate the turn-on delay which is caused by using one relay to activate another. Relay K1 has no function in the operation of the Rig by itself. When the key is closed, it takes about 25 milliseconds for this relay to close, and perhaps another 23 ms for the amplifier relay to pick up, before the output of the Rig is amplified. This causes key clicks on the first dot. The transistor used for Q4** depends on the voltage used on the amplifier control relay and the relay current. With K1 removed, there is plenty of room for the added components on the board.

Some Triton users have complained of an ac hum in the receiver when using a linear amplifier - especially in the narrow CW-1 position. This is caused by ac ripple (or raw ac) on the relay control line. When attached to the Triton T/R relay's normally open jack, unshielded wires going to K1 pass underneath the CW filter which picks up the hum. The solution is simple: reroute the wiring between K1 and T/R normally-open jacks on top of the chassis. This change has been incorporated in late production Tritons.

Audio Sidetone Osc:

Improve the audio of the sidetone by locating C9 on the Audio-Sidetone 80447 board of the Omni and, according to your preference, replace it with a capacitor ranging from .047 ufd to .1 ufd. This will give you a flute-like note and take away some of the raspiness. It is a subjective area and some experimenting may be required to obtain "your" note. (I like it the way it is). In addition, for those who wish to completely silence the audio sidetone with the usline control, replace R5 with 60K to 100K resistor.

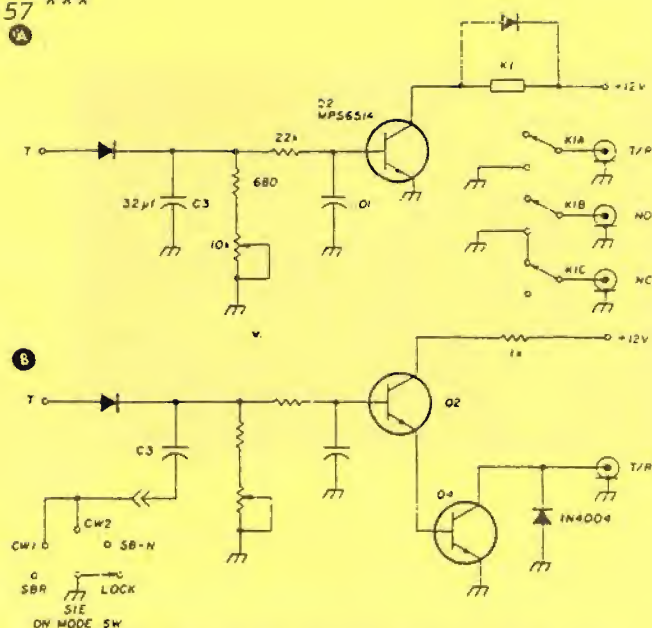


fig. 7. Modification of the Triton IV to remove the control relay and to eliminate unwanted delay times during CW break-in operation.

* The 80281 Board in the Newer 540/544 and all 545/546 Omni's have the delay modification
 ** Transistor Q4 should be a MJE-520 NPN 1A and 40V or greater. It is necessary to jumper the Common pin of the board to the ground foil on the board.
 *** "Redone" by K4CJX who does not transfer the dazzling brilliancy of the Technical Types too well.



To obtain one of these treasured items, send \$4.00 to:

WØEG, George Collier
1816 Third Avenue South
Anoka, Minn. 55303

CFO QSL Cards and Badges

from Doug, W9NAX, CFO #9
and George WØEG, CFO #10

Purpose: CFO Recognition -

- Hamfests
- Accidents I.D.
- Passing Police Blockades
- Free admission to major sporting & political events
- Free bus, subway and cab fare
- Immunity from the IRS



QSL Cards for the CFO!

(Black & White or Red & White)

100	\$9.50	
200	\$14.75	Plus \$1.50 for shipping
500	\$21.00	
1000	\$34.00	

Contact W9NAX (address on sample)

AUTOMATED CLUCKIN?

o o o o 

Here is a circuit that will automate your hand-sent cluckin. Build this little circuit and with a push of a button you'll be instantly identified by your fellow CFO-ers! What does it take? Not much, just a few ic-s and a parts readily available at your nearest Radio Shack and your on-the-air. If sufficient support for this project is made known to me, I'll lay out a PC board and make construction very simple.

Here is how I got the "dit dit dit dit dah":

The Voltage Controlled Oscillator (VCO) A1 generates the timing pulses to drive A2, the Timing Cycle Controller. A short time after power is applied, pin 13 of A3b is clocked high. This enables parallel data to be clocked into A5 and A6 when A3b receives its next clock pulse. A3a is also SET by this signal enabling the VCO to go to its maximum frequency by charging C1 more positive. A3b pin 12 inhibits the output from the SR serial output holding the 'GATE' signal Low. This low then releases K1 relay and turns off the tone from the speaker.

The next clock pulse to A3b (after pin 9 of A3 goes low) toggles A3 and changes A5 and A6 to the serial mode. Their clock then shifts the parallel data out of A5 pin sequentially and enables the shifted data to toggle the 'GATE' signal. During the time the parallel data is being shifted out, A3 pin 1 is entering a serial stream of Highs into A5 and A6 to create the 'Dah' signal. Timing inputs to A4b - pins 5 and 6 signal the end of the 'Dah' by toggling A3a. A continuous Low is then shifted into the register and allows C1 to slowly discharge through R3 and R4. The VCO frequency then slowly decreases aiding in extending the long 'Dah' and increasing the time before the next cycle starts.

The serial Low data entered into the shift registers by A3a is eventually clocked to A4d pin 8 and inhibits the 'GATE' and 'BURST' signals until A3b is toggled by the next High cycle A2 pin 3. Toggling this D-flip flop completes a cycle and starts at the beginning of the next one.

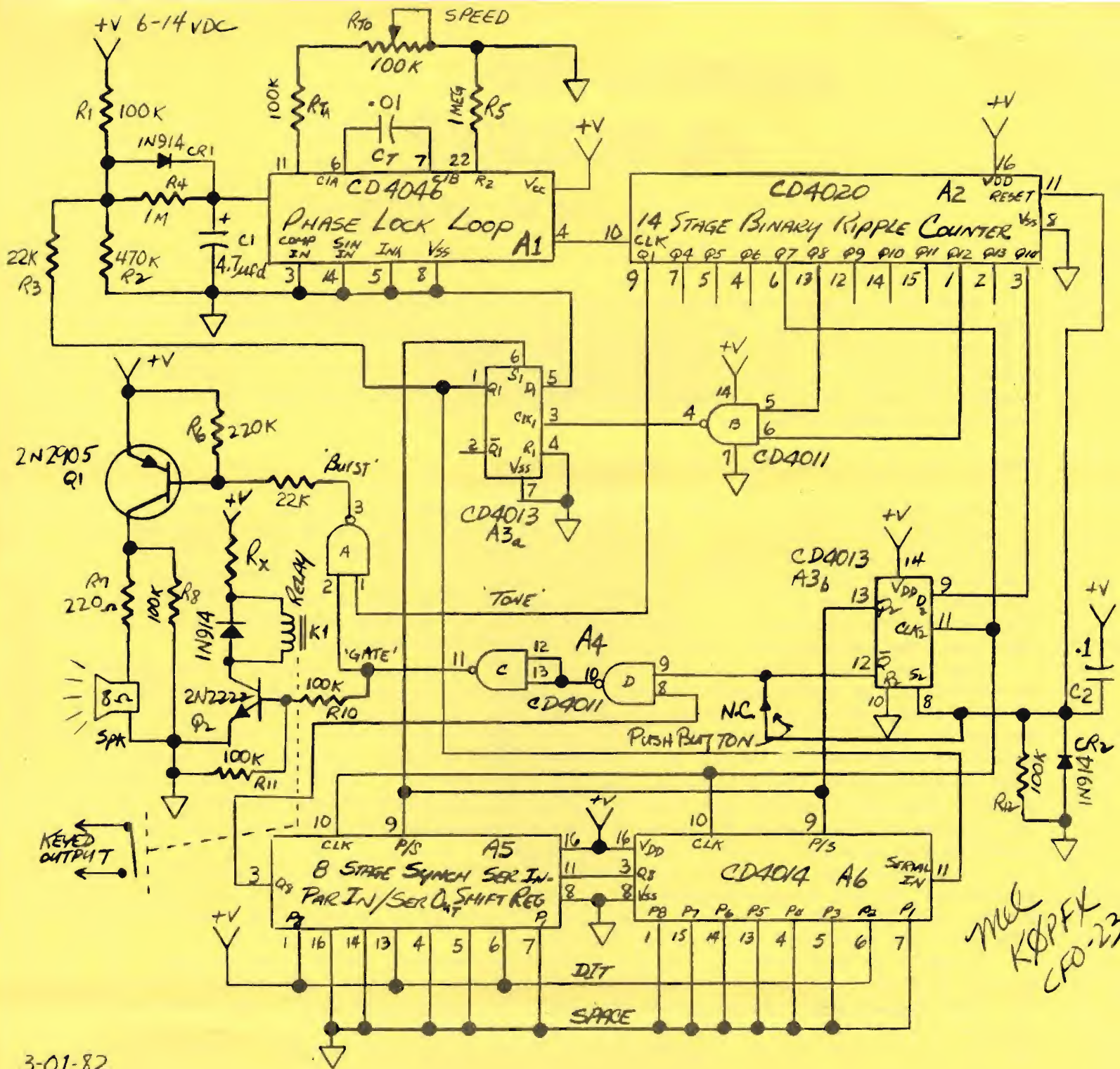
A small 9v transistor-radio type battery may be used for portable or audio only use is desired. Current requirements are less than 500ua between sonic bursts and do - not exceed 30ma during the dits/dahs of the CFO cluckin call. For coop use, I suggest a small battery eliminator to supply the circuit so power will be available for the reed relay of your choice (typically a 5v coil with suitable current limiting resistor). At 9v, the VCO maximum operating frequency is between 1.5 and 2.0 Khz (halve this for the audio tone output frequency). Cycle time (between cluckin calls) exceeds five seconds.

I'll be at Dayton with a model of this 'Clucker' so hope to see you all there.



Mel, KØPFX

See back side for schematic



3-01-82

C-F-O

AUTOMATED AUDIBLE KEYED

PP CLUCKER 99